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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,004	07/11/2003	Yoshihiro Mizoguchi	35880	4381
116	7590	04/14/2005	EXAMINER	
PEARNE & GORDON LLP 1801 EAST 9TH STREET SUITE 1200 CLEVELAND, OH 44114-3108			BRASE, SANDRA L	
			ART UNIT	PAPER NUMBER
			2852	

DATE MAILED: 04/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. **10/618,004**Applicant(s) **MIZOGUCHI, YOSHIHIRO**Examiner **Sandra L. Brase**Art Unit **2852**

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6 and 8-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-6 and 8-11 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al. (US 2002/0085858) in view of Kriegel (US 4,993,992).
3. Yamaguchi et al. (...858) disclose an image forming apparatus comprising: a photoconductor (1a, 1b, 1c or 1d) in which a first gear portion (19) is formed on the axis of rotation and on which an electrostatic latent image corresponding to a toner image is formed by a rotation in a circumferential direction (figures 3-6); a developing unit (5a, 5b, 5c or 5d) which is set correspondingly to the photoconductor, and makes visible the electrostatic latent image formed on the photoconductor thereby to form a toner image; and a photoconductor drive shaft having a second gear portion (18) engaging with the first gear portion and formed on an axis of rotation, which gears with the photoconductor on the same axis and rotation drives this photoconductor (figures 3-6). However, Yamaguchi et al. (...858) do not disclose the claimed tooth of the gear portion different from axial lengths of other teeth. Kriegel (...992) disclose a tooth of a gear portion different from axial lengths of other teeth (abstract; col. 3, lines 55-60; col. 5, line 29 – col. 6, line 47; and figures 5 and 6). The gear portion with the longer tooth is a

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first gear portion and the first gear portion meshes with a second gear portion, wherein when the first gear portion and the second gear portion are in the same phase, only a leading end of the longer tooth of the first gear comes into contact with the leading end of a part of teeth of the second gear (col. 5, line 53 – col. 6, line 66; and figure 6). It would have been obvious to one of ordinary skill in the art at the time of the invention to have one tooth of a gear portion different from axial lengths of other teeth, as disclosed by Kriegel (...992) so as to ensure precise alignment and repeatable blind mounting of driver and driven halves.

Allowable Subject Matter

4. Claims 3-6 and 8-11 are allowed.

Response to Arguments

5. Applicant's arguments filed 1/10/05 have been fully considered but they are not persuasive.

6. Applicant argues that neither Kriegel (US 4,993,992) nor Yamaguchi et al. (US 2002/0085858) disclose or suggest that only the tooth that is longer than the other teeth of one gear portion (first gear) comes into contact with a tooth from the other gear portion (second gear) when the first and second gear portions are in the same phase. However, Kriegel (...992) discloses that in the coupling procedure between the first gear portion and the second gear portion, the longer tooth of the first gear portion comes into contact first with the second gear portion, and at the point in time where the first gear portion and the second gear portion are in

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phase, only the leading end of the longer tooth of the first gear comes into contact with a tooth portion of the second gear (col. 5, line 53 – col. 6, line 66; and figure 6).

Final Rejection

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra L. Brase whose telephone number is 571-272-2131. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur T. Grimley, can be reached on 571-272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sandra L. Brase
Primary Examiner
Art Unit 2852

April 7, 2005